

ABSTRACT OF THE DISCLOSURE

A heat dissipating structure includes a composite having a thermal expansion coefficient between 30 °C and 250 °C in a range from 2 to $13 \cdot 10^{-6} \text{ K}^{-1}$, a volume mass below $3000 \text{ kg} \cdot \text{m}^{-3}$, and a conductivity equal to or greater than $113 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$. The composite is formed by a matrix which is made of a metal, polymer, or resin, in combination with a reinforcement component. The reinforcement component contains microfibers at a volume proportion in a range from 5 to 90% and nanofibers at a volume proportion from 1 to 60%, with the composite obtained through infiltration of the reinforcement component by the metal in liquid state or the polymer and resin in liquid or uncured state. Applied onto the composite is a surface layer having entirely or at least partially a metallic character.